Title: **Creation of Marine Reserve and Incentives for Biodiversity Conservation**

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Abstract: Recently the ecosystem based management have been dealt with in management as a useful approach for fisheries. The goal of ecosystem-based management are sustainable management of fisheries and other marine resource through establishment of well-managed network of marine protected areas. Despite a number of benefits from marine reserve such as increased abundance and biodiversity and potential increased harvest in exploited areas, marine reserve does not provide incentives for fishermen to protected biodiversity and compensation for their financial loss due to the designation of marine reserve. To achieve the fishermen's support for marine reserves, some politicians have taken a new tack such as subsidizing or compensating the fishermen affected by new reserves. The compensation programs are not generally geared to induce the fishermen leave the sector. In fact it is the measure to help the industry adjust to new system of closure. The objective of this paper is to apply principal agent problem to define optimal reserve area, fishing effort and transfer payment in the context of symmetric and asymmetric information between manager and fishermen. It is argued that the principal agent is not applicable to fisheries because although the fish resource is common property and owned by public but the Government does not pay the fishermen to exploit the fish stock in the same way as an owner of a property pay a person to exploit it. However in the case of marine reserve when the managers provide transfer payment for the fishermen to compensate for their loss in catch and revenue in turn the fishermen has to conserve the marine reserve, application of principal agent problem is a reasonable method.